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WHAT IS AGRICULTURAL ECONOMICS?

From time to time, of late, we have seen an increasing number of colleges and universities adding some course or courses in agricultural economics to their published announcements of subjects of instruction. Sometimes these courses are actually presented as scheduled. Often, to my certain knowledge, they are not. But the name at least is with us, and many are asking (and perhaps not least of these are the wistful writers of the college announcements) "What is agricultural economics?"

Possibly the only way to arrive at an answer strictly germane to the query "What *is* agricultural economics?" would be to tabulate these prospectuses from college catalogues, to ascertain and report the actual content of the instruction offered in classroom or lecture, and to review the textbooks or uncoded materials used in the conduct of the courses. We shall, in fact, have some recourse to these methods at a later stage of our discussion. But the quest for a definition may well include an attempt to set forth a fair ideal, instead of contenting itself with merely reporting the "spotted actuality." The really important question is what agricultural economics *may* be or *should* be, and in trying to find the most adequate answer that we can to that inquiry we must not be timorous of passing beyond a strict account of what now is.

I

Doubtless the suggestion which comes most readily to mind is to the effect that agricultural economics is simply general economics applied to the particular business of farming. To answer thus is but to shift the question. What, then, is "general economics"? Very slight acquaintance with economics and economists would suffice to show that it is not one thing, but many. As to scope, method, point of view, purpose, and specific content there is widespread controversy. Their single element of unity consists in the fact that all these labors lie within the wide field of wealth phenomena. There is no pure strain of economics, any more than there is a pure strain of Americans. We have, instead, hyphenated economies, showing plainly their extraction from political, philosophical, or other out-lands, just as we have only hyphenated

Americans, owning more or less remotely the ties of some European mother-land. To apply the term "orthodox economists" to ourselves (or to our enemies) is but a harmless pleasantry, so long as American specific productivity, German socialism, and Austrian marginal utility contest the field with English classicism—and neo-mercantilist and neo-canonist doctrines crop out at every unguarded point. To retain the title political economy is frankly to admit a mixed descent, and join the hyphenated company of social-economics or the newer entrepreneur-economics.

If, then, the "general economics" which is to be "applied to the particular business of farming" prove in fact to be any one of a number of different doctrines, evolved from dissimilar philosophies of wealth, the question becomes pertinent whether they fit with equal ease into the rural setting, or whether certain of them have been elaborated from essentially non-agricultural data, and are applicable primarily to industrial and urban conditions; whether certain other of these economies adapt themselves peculiarly to a rural environment; and whether, perchance, a close inductive study of the business of farming might not serve to give a special direction to economic thought, a particularized body of economic doctrine—in short, an agricultural economics which shall be more than a mere application of industrial economics to agriculture.

It is quite evident that the first economic ideas that were excogitated by men of the early day, before economic theories were differentiated from the general mass of domestic, political, or religious opinions, were derived primarily from agricultural data, since agriculture was so preponderantly the form of all economic activity. It is equally true, however, that the problems of value of product and cost of production took on but the haziest outlines until the development of commercial relations made clear the fundamental facts of exchange-value, and thus gave new emphasis to the relation between income, costs, and profit. The economic problem of agriculture (as something different from its merely technological problem) did not take shape until husbandry found itself overtaken by, and made part of, a differentiated commercial-industrial régime.

We may note also that it transpired in the course of this evolution of modern exchange society, that it was the trader who first

picked up from the routine practice of his calling an empirical knowledge of certain of the principles of economics. Learning something of how values are created in the market, he was not slow to utilize the possibilities of restrictive legislation as a means of bringing about price situations favorable to himself. Trader and farmer thus re-enacted the little drama of Jacob and Esau, and it was the shrewd, trading Jacob that won away the blessing of paternalistic aid from his less sophisticated brother, Esau of the fields. So far, in fact, did mercantilist legislation operate to the discouragement of agriculture that it threatened the stability of the whole economic structure. Such was the situation when economics was born, and *Physiocratie*, as the first attempt to formulate a complete system, was concerned primarily in bringing agriculture back to its proper importance in the whole scheme of extraction, fabrication, and trade.

But the mere fact that economics began with an "agricultural system" or was, as it styled itself, an *économie rurale*, does not mean that it derived from rural data a set of answers to the questions which we now regard as of prime economic importance. M. Quesnay's exposition of the distributive process is utterly unsuited to the solving of our modern problems of interest, wages, and profits. Nor is his analysis of production any more adequate. What it did do, of course, was to set forth, as the main premise upon which political economy should build, the dictum that agriculture was the only productive calling or employment. As to whether it was the land or the labor which was the productive factor when the two were joined in an agricultural enterprise, the physiocrats' argument was not so clear as might be wished, but the net result of their teaching was to represent land as the only truly productive factor.

In England, the classic writers gave but scant attention to these ideas. Adam Smith refuted the "agricultural system" in about one-tenth the space which he devoted to demolishing the arguments of mercantilism. He is interested primarily in the division of labor, the employment of stock, and kindred topics, and from his day on, the run of attention in Britain was toward trade and the new industrialism. At the same time, England was, not less than France, a land whose cultivable area was exploited close up to the

limit set by the prevailing farm technique. While the English classicals repudiated the narrow views of the physiocrats and adopted a more discriminating estimate of the productive contribution of the various employments, they never got away from a sober realization of the fact that land area (whether at home or over-seas) was an indispensable and not altogether reproducible factor in their economic organization. It was, therefore, from data of a somewhat constricted agricultural environment that they built up their economic theories. Under such conditions, the appositeness of the Malthusian principle of population, the law of diminishing returns, Ricardian rent, and the iron law of wages can hardly be denied.

But early American economic theories grew up in utterly different surroundings. Land had no value save as a value was created upon it by the labor of the settler and by the outlay of labor and capital by those others who built cities or laid down railways or dug canals. Laborers were scarce, and every child was a precious asset instead of an alarming liability. Richer lands were being opened up, machinery was making labor more productive, and natural science was arming the producer with a better and yet a better technique. Not unnaturally the men who lived in the midst of such conditions threw over the whole system of English orthodoxy, and sought to formulate new laws from the inspiring circumstances among which their lot was cast. The American School, from Raymond to Patten, reconstructed economic theory in accordance with agricultural data that lay closest at hand. Even their opinions upon industrial affairs were premised upon superabundant land, cheap raw materials, and a low cost of living.

It was not long, however, before the growth of industrialism in America gave to our economic discussions a setting not dissimilar to that which commanded the attention of European thinkers, and the men of the new American school owe more to English and Teuton inspiration than to a direct descent from the earlier native writers. Neo-classicism naturalized (and shall we say improved?) amidst our new industrial surroundings the system that English writers from Smith to Mill had deduced from a similar but earlier period in the life of our British cousins. Specific productivity was

the American elaboration of the germinal idea of marginal utility developed by Jevons and the Austrians. The more specialized this development became, the more did it depart from agricultural sources of inspiration, the more did it concern itself with the solving of problems of factory wages, interest upon funded capital, and the profits of industrial entrepreneurship, and the less pertinent did its discussions become to the problems of the organization of farming and of the farmer's income. Should we take Professor Clark as typical of this movement, it seems evident that his mind has not been filled with contemplation of rural life and the economic activities of country folk. Though Clark took his cue from a suggestion of Henry George concerning agricultural utilization of land and labor¹ and from von Thünen's² analysis of rural enterprise, his own elaboration of the specific productivity doctrine seems distinctly to be based upon conditions of incorporated capital, minute division of labor, and wire-edge competition in entrepreneurship and hence an *imputation* of productivity not dreamed of by the farm proprietor.

In view of the fact that several of the recent writers seem definitely to have turned their eyes away from agricultural data, it appears all the more noteworthy that they have arrived at much the same conclusion as did the early Americans, who could see nothing else. Both tend to eliminate the distinction between land and capital. And whether the argument be from the social organismic premises of Clark or from the business accounting and private entrepreneur viewpoints of Fisher and Davenport, their conclusions chime in with the lay opinion of the farmer himself. This raises an interesting question as to the relationship between industrial and agricultural economics. Is it mere accident that the only two Americans who have attempted a textbook on agricultural economics have both clung to the older view? Professor Carver stands out among modern writers on distribution, by reason of this very fact, and Professor Taylor has stayed as close to the

¹ Clark, *Distribution of Wealth*, p. vii.

² *Ibid.*, footnote, pp. 321-24. Those who do not find themselves in agreement with the specific productivity theory might feel that the very fact that von Thünen was analyzing an agricultural situation was what saved him from going to the lengths to which Clark went.

classic doctrine, and the larger part of his book¹ is given over to the discussion of this factor of the farm enterprise.

This raises the whole question of the "surplus" concept, which is the keynote of so much of economic theory. From the physiocrats to Carver and Taylor, through classic and neo-classic lines of descent, there has been a school which views surplus-ness as an attribute of the land. The Socialists, on the other hand were concerned with a surplus attributable to labor. And modern industrial economics inclines to identify the idea of a surplus with the function of entrepreneurship and to believe that such surplus goes inevitably to the controller of capital, whether the form of capital be land or other instruments of production.

We have already noticed the persistence of this first idea in discussions of the economics of agriculture from the most ancient to the most recent. Entrepreneurship as such is not an idea which has been very largely developed in connection with rural enterprise, but it is probable that the modern farmer who, as we have already said, views his payments for rent or land-purchase in the same light that he does his outlays for other productive goods comes to identify, at least vaguely, his chance of securing profits with his ability to control capital. If one now has to pay two hundred dollars an acre in order to get a farm and benefit from the extraordinary profits that accrue by reason of the outbreak of the European war or the rise in the cost of living, it is evident that the entrepreneur gains in agriculture are indeed a function of the control of capital. But when one could take up a homestead gratis from the government, the essential prerequisite to entrepreneurship was evidently not the control of capital, but the ability to endure hard work and privation and to bear many children. Since, however, these are personal qualities, their possessor commonly regarded all his income as the return to labor. In fact it has been characteristic of our farmer folk that they have never formed the habit of thought which imputes some part of the total product to factors of production other than labor. Where they have created a value

¹ Taylor, *Agricultural Economics*. His discussion in the *Quarterly Journal of Economics* (XVII, 598) is an elaboration and extension, rather than a denial, of the central tenet of Ricardo's doctrine.

upon raw land and secured capital by a process of saving rather than by borrowing, the productive power so added has appeared hardly less personal than physical strength, native shrewdness, or an acquired education. When, after a generation or more of such conditions, mere ownership of land and capital passes over to non-resident hands, while the actual productive operations remain in the hands of the farmer, have we not the conditions for the development of a socialist philosophy in the open country, such as has never been furnished by slave and villein and yeoman types of farming?

Assuredly the inner facts of Granger legislation, the rural attitude toward Eastern mortgage holders in the nineties, and the present gospel of hate toward the produce middleman would all be worthy of a careful search for the purpose of ascertaining whether here are or are not the inductive materials out of which our country populations are building up a socialistic philosophy of their own. Certainly the call for state aid wails loud in the land whenever the farmer believes himself to be losing ground in his contest with other classes. Only the form of the demand changes with the times; from internal improvements to cheap money, from extensive bureaus of agriculture to rural credits. Lassalle's theory of *Konjunktur* finds a very pretty illustration when the farmer admits that the risks of modern commercial agriculture are too much for him to meet single-handed. To only a very small extent has he underwritten them through private agencies of equalization such as hail-insurance companies. He seems more keen by far to socialize them through state activities paid for by taxes upon public utility corporations or by customs duties. Some of the proposals soberly propounded by cotton planters after the outbreak of the present war were calculated to take even a socialist's breath.

The writer has no desire to press this discussion for its own sake. What has already been said is merely for the purpose of suggesting that there are fundamental questions of theory underlying the practical programs whose discussion makes up so large a share of what we know generally as agricultural economics, but which all too often fail to touch bottom on any economic principle whatsoever.

Agricultural economics is, no doubt, an application of general economics to the particular business of agriculture, rather than an independent set of doctrines built up out of a specialized body of data. But this is not to be an application entirely after the fact: economic laws are not promulgated like edicts from some imperial capital imperfectly informed concerning conditions within the province in which they are to be applied. All voices must be heard in the establishing of truths, not less than in the securing of political stability. If we are to avoid the dangers of an industrial economics of capital or a socialist economics of labor as well as an agricultural economics of land, the facts of farm enterprise must not be neglected in favor of the data of commercial and manufacturing activities by those who aspire to enunciate the principles of the science.

To resort to an analogy, agricultural chemistry is not a science distinct from industrial chemistry and both of these in turn independent of some unspecialized general chemistry. It is, instead, the application of principles, supposed to be universally valid, to the particular phenomena of agriculture. But the man who goes forth equipped with this general chemistry into the field of agricultural research, begins at once to add to his store of knowledge of chemical properties and reactions. He must qualify, correct, and extend those principles with which he first essayed to solve the chemical problems of soil fertility, of plant and animal life. And these labors of his, detecting error and discerning new truth, go in due time to enrich the central science of which his field is but a specialized department.

Similarly, agricultural economics is not a science distinct from other economic science, nor, on the other hand, is it merely an art devoid of scientific implications and responsibilities. It may happen, indeed, that the very attempt to apply to agriculture, economic theories of supposedly general validity but elaborated from industrial surroundings, shall prove to be the test which reveals the inadequacy of their premises or the incompleteness of their analysis. At all events, the most careful builder of an economic system cannot felicitate himself upon having achieved a really valid doctrine until he has ascertained the adequacy of his principles to explain the facts of rural as well as urban enterprise.

Nor does it behoove us to be narrowly insistent that what appears to be the truth in our particular sphere, is the truth about the whole. We should get a larger sense of relationships than did the blind men of the fable. The elephant is not a great serpent, even though a close inspection of his trunk might suggest such a thought; nor is he like a tree, though feeling of his legs shows them to be tree-like; nor yet is he fashioned like a wall, though passing a hand over his broad, flat sides may lead one to suppose so. In fact, the whole truth even about trunk or leg or side can be perceived only when it is considered as part of a larger whole. The best hope we can venture for agricultural economics is that it shall take and maintain its proper place of dependence and assistance, and that general economics may be both its point of departure and the goal of its return.

II

But this is only half the story, and many who profess an interest in the subject would doubtless pronounce it much the lesser half. The demand of the hour is not for a science adjusted with nicer refinement to all phases of the truth, but for an art to give immediate and practical counsel concerning the conduct of today's farm undertakings. When technical improvements have gone as far as they may, it is still evident that modern agriculture is more than a merely technological process, since the success of agriculture is to be measured in income and not alone in physical units of product. Toward this end of enlarging cash return in an exchange society the art of economic organization is not less important than scientific knowledge of fertility and plant and animal breeding.

When we come to set forth this art of agricultural economics in a formal statement, however, it becomes evident that its character will be much modified by the nature of the goal we have in mind. Is it that of individual gain, national strength, or social well-being? We in America have got, perhaps, far enough away from the older and narrower ideas of nationalism so that we feel little or no conflict between these latter two ideals. And under conditions of peace the economist would be likely to agree that a policy that secures social welfare makes, by so much, for national strength. However, the first group of writers who turned serious

attention to the subject were not thinking solely of conditions of peace. In Germany the economic art of agriculture has not been concerned primarily with securing a large return to the farmer or of directing the productive forces of the nation into the channels where national resources and market conditions offered greatest return upon such expenditure, but a canny eye has been kept upon the exigencies of possible war and the need of having the country able to feed itself in such a crisis. By way of illustration, we may quote a few lines from a treatise on agricultural economics published in 1899:

Under normal circumstances the domestic agricultural production of a nation should certainly provide for the needs of the resident population as to necessary products of the soil, especially as to the indispensable foodstuffs. Otherwise the country falls into a position of greater or less dependence upon other states, which are in a position to produce more human subsistence than is needed within their own domains. This dependence is especially precarious in time of war and for such lands as, like the German Empire, are bounded on nearly all sides by other countries, and have only a very limited access to the open sea. In a war with Russia, France, England, or several of these countries together, the adequate maintenance of the home population might be seriously endangered. To be sure, this danger is somewhat lessened by a strong fleet such as we hope to have in our possession in the course of a few years, but yet is by no means entirely removed. *It remains, at any rate, an especially vital problem for German agriculture to strive to provide its domestic needs of indispensable means of subsistence, and particularly its breadstuffs.* Out of regard for its own existence, even, the government is compelled, so far as lies within its power, to assist agriculture in the solution of this problem.¹

Thus is German agricultural economics indentured to the service of a politico-military master, rather than left to an intellectual freedom of enterprise. It is designated *Agrarpolitik*—a not-to-be-neglected segment of the cameral *Nationalökonomie*.

Quite different is the *économie rurale* of France, and decidedly worthy of our attention because it appears to be most closely akin to much of the work which has been done in our own country. While the character of the German *Agrarpolitik* was being determined by the dedication of all scholarly endeavor as well as material resources to the purpose of national strength and self-sufficiency which has been unfolding since 1870, France has thought more in

¹ Goltz, *Vorlesungen über Agrarwesen und Agrarpolitik*, p. 11.

terms of individual prosperity of her farming population as furnishing the raw material of national well-being. Agricultural economics has been viewed as the culmination of a mighty effort on the part of agricultural science to put in the hands of the *cultivateurs* of France the most complete intellectual equipment possible for the pursuit of their calling. We may well let Jouzier, who has written probably the best of the French texts, speak for himself and his colleagues. He points out that, after the agriculturist has had a thorough training in pure science and the *sciences technologiques* of his craft—

He is then able to practice the art of agriculture, which involves simple transformations of material by the process of cultivation, but not the industry of agriculture, which involves, at the same time and to a greater extent, the realization of an increase of wealth. And he needs, moreover, in order to enable him to accomplish this double purpose, to appeal to social science, which teaches him to understand man so far as he is a social being, the needs and desires which govern him, the higher laws which he obeys in the social relationships which he forms with his fellowmen; he ought lastly to have recourse to rural economics in order to learn, as we have said before, to co-ordinate the action of all his industrial resources, to the end of making the greatest profit possible. . . . But if, according to our point of view, rural economics remains the science of the internal organization of the agricultural enterprise, we shall not commit the mistake of confining it within too narrow limitations and excluding from its province all that concerns the relationships of the enterprise with the outside world. . . . It is, so to speak, the agricultural science of sciences, not because it claims a quality of superiority, but because it draws upon them all and sums them all up, to speak the last word of technological science, *profit*.¹

Here in the United States, anything approaching systematic study of the economics of agriculture was deferred until a very recent day. The extraordinary circumstances of the free-land period tended both to direct men's minds away from purely

¹ E. Jouzier, *Économie rurale*, pp. 14-16. By way of formal definition, he says (after giving the Greek etymological meaning of the word "economics"): "L'adjonction du qualificatif *rurale* délimite simplement le domaine pour lequel il doit être entendu. Au lieu de dire *la maison*, nous devons dire *la maison rurale*. Et comme la *maison rurale*, c'est la *ferme*, ou, d'une manière plus précise, *l'entreprise agricole*, nous dirons que *l'économie rurale est la branche de la science agricole qui enseigne 'la manière de régler les rapports des divers éléments composant les ressources du cultivateur soit entre eux, soit vis-à-vis des personnes,' pour assurer la plus grande prospérité de, l'entreprise.*"

economic theorizing, and to mislead them when they did attempt to pass strictly economic judgments upon what was taking place in our agriculture. The outstanding facts about our farm situation were those of national enlargement, the growth of a home market for manufactured products, eternal speculation in land, and the providing of an attractive alternative of free enterprise on the farm for all who had accepted wage or salaried positions in trade or industry. Psychic satisfaction, speculative gain, the need of protecting an investment in land, or the inability to get away from a sorry venture in farming—these with immigrant wage and living standards and blindness to the facts of impairment of fertility, conspired together so to obscure the issues as to actual costs of production and return to labor and capital that the whole situation touching the supply of agricultural products was thrown into confusion. Men acted as though they conceived themselves to be living under an economic moratorium, and the probability of an ultimate day of settlement was calmly disregarded. But the naïve assertion that “rainfall follows the plow” met tragic refutation in the years that followed 1883, and the widespread collapse of farm prices in the eighties and early nineties brought a strong revulsion from the craze of agricultural adventure.

Of the physicians who undertook to minister to the farmer's ailments, two schools may be distinguished. The homeopaths, who believed that like cures like, attacked the ill of over-production by seeking to remove every obstacle that stood in the way of maximum yields of grains, of animal products, or of textiles. Such were the efforts of the numerous departments of agriculture, agricultural colleges, and experiment stations, which were being established one after another in the latter half of the nineteenth century. The allopaths, on the other hand, put their faith in stronger draughts of remedial legislation, such as cheap money (whether silver or green-back), the curbing of the railroads, tariff legislation, the lightening of taxation, and the curtailment of banks' and mortgage holders' powers.

It might be hazarded that the greatest immediate benefit to the patient came from the old-fashioned process of “bleeding,” whereby a considerable volume of country population was drained away to the cities during the years of agricultural depression. But, however

that may be, agricultural economics has emerged as an eclectic movement superseding the two earlier schools. Since agriculture aims, not at bigger corn and fatter hogs as such, but at larger financial net returns, and since even political measures of reform must depend for their effectiveness and permanence upon their economic soundness, the hope of both the farmer and his friends has come to be placed more and more upon a broader and deeper understanding of the price relationships involved in the carrying on of our commercialized business of farming.

As already indicated, our professional economists have taken comparatively little part in the formulation of an agricultural economics. Whether because they were not sufficiently familiar with the data of scientific agriculture, or because they were too much engrossed in the study of the many pressing problems of our bewilderingly expanding industrial life, they have as yet sent but few adequately trained workers into the rural field. The task was accordingly undertaken by those already engaged in the work of instructing and helping the farmer. The need for economic readjustment came most pressingly to the attention of the men who had been commissioned first to work out a better technique of farming. Foremost among them were the administrative officers of our agricultural colleges and bureaus of agriculture, both state and national. These men did their splendid best to meet the new demand. But it can hardly be denied that much of the discussion which resulted has been of a decidedly inadequate sort. This is but the inevitable consequence of the fact that the workers were trained as horticulturists, soil chemists, or veterinarians, rather than as economists. Their lack of specialized training caused the treatment of the subject to be fragmentary and superficial—prescribing salve for out-breaking sores, rather than tracing back the chain of their causation to some constitutional or organic derangement. Strangely enough, in the very quarters where the scientific method had been enthroned by chemist, entomologist, thremmatologist, agrostologist, and all the numerous brotherhood of scientific agriculture, it was empirical methods that were resorted to in the attack upon the economic problems of agriculture. Rural credits have been discussed as though the cost of capital accumulation or the productivity of capital outlays had no bearing on the

question; farm prices in terms of "the parasitic middleman"; and the whole question of utilization and conservation of natural resources under the blanket of the "inherent rights of the farmer."¹ Co-operation is urged as a panacea for all rural ills, not as merely one particular form of economic organization, whose effectiveness in operation is determined and limited by the appropriateness of that special type to the given situation.

Schools that give evidence of the highest ideals so far as their technical courses in agriculture are concerned, who would regard it as fairly impious to offer courses in agronomy, animal husbandry, or horticulture without demanding a thorough grounding in chemistry, biology, and physics, appear to think that nothing but common-sense is prerequisite to a mastery of the most complex of the economic problems with which our agricultural industry finds itself confronted. Many such institutions, even some agricultural colleges in important farming states, offer no comprehensive survey of the field of agricultural economics but, instead, one or two separate subjects (co-operation, marketing, and rural credits are the favorites), which must in the nature of the case be mere descriptive treatments, since the students have had no previous training in general economic principles. Often the instructor himself has little more.

We are all aware, however, that the last few years have witnessed a considerable change, and that the subject has been greatly advanced. Young men who were intimately interested in, and familiar with, agricultural conditions (and who thus avoid the disability under which the older economists labored) have been carefully training themselves in economics (thus escaping the limitations of the older agriculturists) with the definite purpose of making a professional career in the field of agricultural economics. The question then obtrudes itself: what conception does this emerging group of specialists entertain concerning the subject which they are in process of elaborating? Here we find, as previously suggested, a striking kinship with the French *économie rurale*. The goal set up is productive efficiency, and agricultural economics aspires merely to extend the farmer's technique to cover and con-

¹ See *Report of the Country Life Commission*, pp. 29-41.

trol value returns as well as mere physical units of product. Most of our agricultural economics has been developed in connection with our colleges of agriculture and, without disparaging its very great value and service, it may be suggested that current conceptions of the subject still remain somewhat under the shadow of this agricultural college origin. That is, the system of independent and individually organized farm operation which has grown up in the United States during the cheap and free land era, is taken as the datum plane above which is to be erected a structure of prosperity and economic efficiency. It may be an entirely valid conclusion of sociology or political science that we need to maintain an independent land-owning class of farm proprietors. But it is obvious that the economic theory of agriculture built upon such a premise is likely to be quite different from one constructed by economists untrammelled by preconceptions other than those laws (such as diminishing returns or the broader principle of combining proportions) which are the foundations of their own science.

There has been another group of thinkers, to be sure, growing up outside the professionally agricultural interests in recent years, as the failures or distresses of farm life and industry have crowded themselves upon general public attention. Migration to the city, decline of our agricultural surplus, and the rising cost of living have caused merchants, bankers, educators, politicians, and even the private consumer to feel a sudden access of interest in questions touching the economic organization of our agriculture. They have not been concerned primarily about the prosperity of the individual farmer nor pledged to maintain the existing order, but they have been decidedly solicitous about the efficient working of the system as a whole, to the end that there may be cheap and abundant materials for trade and manufactures and a lower cost of living.

Now many of these persons have taken the position that the efficiency and success of agriculture as a whole are to be obtained only by giving to the farmer-as-we-find-him a better training for his task and by making this training include business as well as scientific aspects of farming. Professor Carver writes a book to "emphasize the public and social aspects of the problem,"¹ and

¹ *Principles of Rural Economics*, p. v.

Mr. Roosevelt launches a Country Life Commission for "better farming, better business, and better living." But these efforts to make more stable the economic foundations of the existing politico-social system, as they work downward from the security of the yeoman class to the prosperity of the individual farmer meet the rural leaders who are striving upward from personal success to group solidarity, and both join hands in a practical program of rural betterment.¹

It is evident, however, that this second movement is by no means the American counterpart of the *Agrarpolitik* of Germany. To be sure, it regards the country as the natural breeding ground of the nation, and the country family as the bulwark of our social and political system. But it does not propose that the whole course of agricultural production should be stimulated or retarded or, in general, artificially directed by means of tariffs, bounties, special transportation rates and labor arrangements, toward the goal of national self-sufficiency in time of war. It is concerned rather with the maintenance of "economic independence," the most productive use of natural resources, and a proper balance between extractive, commercial, and manufacturing industry. But a close scrutiny of this recently awakened concern in farming as a business will serve to reveal possibilities of a new economics of agriculture which shall be more independent, more searching, and more thoroughly economic in character than any we have known in the past.

In the wild turmoil of exploitation, agricultural issues were confused; in the subsequent swing of interest toward trade and manufactures they were to a large extent neglected. But the present lively interest in agriculture promises a better balancing of our various industries and the thorough, patient disentangling of

¹ This in turn shades off into rural sociology (whatever that is). And, as in the case of social economics in general, it runs ambitiously toward ethical criticism and evaluation. This is noticeably true with regard to current discussions of the market distribution of agricultural products. "The field of distribution presents problems which raise in very grave ways the simple (*sic*) issue of justice. That under existing conditions in many instances the farmer does not get what he should for his product; that the consumer is required to pay an unfair price; and that unnecessary burdens are imposed under the existing system of distribution, there can be no question."—Secretary Houston, in *Yearbook of the Department of Agriculture*, 1913, p. 26.

the economic issues concerned with agriculture. What we have learned in the more highly (and perchance less personally) organized departments of industrial life will give us at least hypotheses and suggest ways of going about the analysis of the problem of agriculture. Entrepreneurship, for instance, has come to be viewed as a distinct factor in economic enterprise, with a definite and recognized position of reward and service. What shall we say of entrepreneurship in agriculture? Evidently there is opportunity and need for the economist to analyze and expound this phase of agricultural organization. One suspects that he might reveal significant wastes of managerial ability in a system where the great majority are limited to small, privately organized farms, and a crippling lack of such ability where nearly every farm worker must organize and conduct his own industrial unit. Much the same may be said for capital and labor. When the alert business man finds that there are opportunities to make capital earn larger returns in agriculture under his own direction than by loaning it to farmers, or greater chances of reward to entrepreneurship in farming than in commercial operations, then we may be sure that the existing organization is going to meet competition of a new order. Whether the economist shrewdly traces out these influences and tendencies a day before they become working realities, or whether he be simply an up-to-date and intelligent interpreter of what is going on about him, his services in this direction are much needed if we are to act intelligently toward the future of our husbandry.

Agricultural economics should teach us to think through the utopia of co-operation or the bogey of corporation farming to the fundamental issues of effective economic organization of human effort and natural resources, which underlie them. Beneath the superficial problems such as how best to distribute a carload of peaches, to procure a blooded breeding animal, or to effect the underdrainage of a particular field are to be discerned certain larger, more general principles whose operation determines what is the most efficient way of equipping labor with capital-goods and captaining it with entrepreneurship for the production of agricultural commodities. That is the ultimate problem of agricultural

economics, and, whether social welfare or private gain be taken as the point of departure, the real battle must be fought upon this ground.

To set forth explicitly the goal and purpose of our work is in large measure to clear up our ideas as to the proper scope and manner of treatment of the subject itself. The essential reason we have for teaching economics at all is that the student may learn to "think economics," to trace the cause-and-result sequence as touching the phenomena of wealth, whether the specific problem in which these phenomena have their setting be one which involves his immediate interest in private income and property, or the larger interest which as a citizen or member of some other social group he is bound to have some part in shaping. By the same token, our purpose in elaborating an economics of agriculture is to train the agriculturist in the business principles which govern the commercial success or failure of his enterprise, but not less to enable him and likewise those others who are not engaged in agriculture, to perceive the economic results which will flow from one sort of agricultural organization or another, from one sort or another of consumption of our resources of land, labor, and capital.

For the college of agriculture there should be, by way of foundation, a general elementary course covering the fundamental principles of economic theory. The elementary course in economics as presented in most American colleges and universities today has been pretty well standardized: this same general subject matter is well suited, by merely substituting the facts of agriculture to point the morals and adorn the tale, to furnish the content of the basal year in agricultural economics, leaving to subsequent courses the more detailed treatment of special phases of the subject. An examination of textbooks and college announcements seems to indicate that at present most courses begin with a rather detailed study of production (now often including marketing) and, except for the many who stop with that, leap over to a fragmentary discussion of distribution as touching the farmer's profits. But this is no adequate preparation for meeting the more intricate problems facing modern agriculture. The student, besides examin-

ing the economic factors in technical productive efficiency, needs to understand the laws of value and the process by which physical units of product are fitted to psychic units of want through the agency of an exchange mechanism; he needs to consider not only how this aggregate lump of values is broken up into private incomes, but how the use of this wealth in private hands reacts upon the further operation of the system. Even when for practical reasons the course in agricultural economics must be much compacted, it should be reduced to a stout framework of fundamental principles instead of bloating into a flabby mass of descriptive generalities. The sea of print inundates the country as well as the city today, and the young man who goes out from the agricultural college will have presented to him more than enough plans and projects and suggestions concerning the conduct of his business. Our best service is in training him so that he will think clearly and choose wisely, to enable him to distinguish between alluring promise and innate possibility of performance.

But such labors with and for the student who expects to take his place in the agricultural class is not all. The status of our agriculture is not exclusively the concern of country people, but is an issue of the highest public moment. As such it should command a broad and deep attention. We have long since perceived the value of presenting courses dealing with labor unions, trusts, and railways to young men who do not anticipate ever joining a union or employing others who have, who will certainly never be directors in even a small corporation, and who may never even so much as own a share of industrial stock or a railroad bond. It is clearly a matter of much importance that the college-trained men of the oncoming generation shall be prepared to act intelligently, whether as business men or as citizens, with reference to these great economic institutions. But surely the importance of agriculture in our whole industrial system is great enough to justify in no less measure the inclusion of at least one solid course in agricultural economics in the curriculum of every great university even though it have no professional school of agriculture. Harvard University is, I believe, the lonely pioneer.

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